



Third International Symposium on Beryllium Particulates and Their Detection

Co-Sponsored by:

**Beryllium Safety and Health Committee
Eichrom Technologies LLC
Savannah River National Laboratory
National Institute for Occupational Safety and Health
U.S. Department of Energy**

**November 17-19, 2008
University of New Mexico
Albuquerque, NM**



Sandia National Laboratories



THIRD INTERNATIONAL SYMPOSIUM ON BERYLLIUM PARTICULATES AND THEIR DETECTION

Beryllium is an important issue in the United States and an emergent issue globally. This conference, arranged by the Beryllium Health and Safety Committee, will serve as a technical forum for scientists, industrial hygienists, and medical researchers from around the world to share current information about detecting beryllium particulates and the health risk posed by these particles. The format includes oral technical presentations, vendor displays, and a sampling tutorial. The conference begins on Monday afternoon with a half-day tutorial on sampling methodology. Tuesday's opening plenary session will give overviews of beryllium exposure assessment history, industrial hygiene, analytical, and medical issues. Tuesday afternoon will be devoted to medical and epidemiological aspects of beryllium. Wednesday will focus on sampling and analytical issues including sample preparation and new advances in beryllium analysis. The meeting will conclude with a presentation on beryllium health and safety research priorities.

Presenters are encouraged to submit manuscripts for consideration for publication in a special issue of the Journal of Occupational and Environmental Hygiene (JOEH) in 2009. Submitted papers will undergo peer review prior to acceptance for publication in the JOEH proceedings special issue. Authors are encouraged to submit their papers at the symposium or immediately thereafter. The deadline for submission of manuscripts is December 31, 2008.

Please submit manuscripts to K. Ashley at: Kevin Ashley, Ph.D., CDC/NIOSH, 4676 Columbia Parkway, M.S. R-7, Cincinnati, OH 45226-1998 (USA); tel. (513)841-4402; fax (513)458-7189; e-mail KAshley@cdc.gov; or to A. Ekechukwu at: Amy Ekechukwu, Ph.D., Savannah River National Laboratory, Bldg. 773-41A, Aiken, SC, 29808 (USA); tel. (803)725-1236; fax (803)725-4704; email amy.ekechukwu@srnl.doe.gov.

Symposium at a Glance

MONDAY, November 17, 2008 - All times are Mountain Standard Time

1:30 – 4:30 p.m. **Sampling Tutorial – Auditorium**
Kevin Ashley – CDC/NIOSH, Cincinnati, OH
Geoffrey Braybrooke - U.S. Army CHPPM, Aberdeen
Proving Ground, MD
Steve Jahn – Savannah River Nuclear Solutions, Aiken, SC
Mike Brisson – Savannah River Nuclear Solutions, Aiken,
SC

TUESDAY, November 18, 2008 - All times are Mountain Standard Time

7:00-8:30 am **Registration – Lobby** **Breakfast – Dining Room B & C**

Auditorium **Opening Plenary Session – Melecita Archuleta, Sandia**
National Laboratory, Presiding

Sponsored by NIOSH Division of Applied Research and
Technology

8:30-8:40 am **Opening Remarks – Melecita Archuleta,**

8:40 – 9:20 am **A History of Beryllium Exposure Assessment - Paul F.**
Wambach, DOE, Office of Illness and Injury Prevention,
Washington, DC

9:20 – 10:00 am **Beryllium Sampling Issues and Practical Impacts for the**
Industrial Hygienist in the Field - Gary E. Whitney, Los
Alamos National Laboratory, Los Alamos, NM

10:00 – 10:20 am **BREAK – Sponsored by NIOSH Division of Applied**
Research and Technology

10:00 am-4:00 pm **Vendor Exposition Open – Dining/Break Room B & C**

10:20 – 11:00 am **Overview of Beryllium Analytical Chemistry – History, State**
of the Art, and Future Needs - Michael J. Brisson,
Savannah River Nuclear Solutions, Aiken, SC

11:00 – 11:40 am **Medical and Epidemiological Issues Overview –Peggy**
Mroz, National Jewish Health, Denver, CO

11:40 am-1:30 pm **Lunch – Sponsored by DataChem**
Vendor exhibits are available for viewing

Symposium at a Glance

SESSION B Auditorium

Medical/Epidemiological Effects – Routes to Exposure and Sensitization - Peggy Mroz, National Jewish Health, Presiding

Sponsored by DOE

- 1:30 – 1:40 pm **Introduction – Peggy Mroz**
- 1:40 – 2:05 pm **Beryllium in the Tissues of Weapons-site Workers - Anthony C. James, U.S. Transuranium & Uranium Registries, Washington State University, Richland, WA**
- 2:05 – 2:30 pm **Beryllium Toxicity In Relation To Chemical Forms And Particle Sizes - Caroline Muller, University of Montreal, Department of Occupational and Environmental Health, Montreal, Canada**
- 2:30 – 2:55 pm **The Basics of Particle Size-Selective Sampling for Beryllium - Mike McCawley, Department of Community Medicine, School of Medicine, West Virginia University, Morgantown, WV**
- 2:55 – 3:15 pm **BREAK – Sponsored by ERA**
- 3:15 – 3:40 pm **Variable Response to Long-term Corticosteroid Therapy in Chronic Beryllium Disease - Akshay Sood, University of New Mexico, Albuquerque, NM**
- 3:40 – 4:05 pm **Beryllium Alters Lipopolysaccharide-Mediated Intracellular Phosphorylation and Cytokine Release in Human Peripheral Blood Mononuclear Cells - Anu Chaudhary, Los Alamos National Laboratory, Los Alamos, NM**
- 4:05 – 4:30 pm **Exposure and Genetics Contribute to the Risk of Beryllium Disease - Mike Van Dyke, National Jewish Health, Denver, CO**
- 4:30 – 4:55 pm **Upregulation of I-CAM1 in Response to Beryllium Exposure in Small Airway Epithelial Cells - Elizabeth Hong-Geller, Los Alamos National Laboratory, Los Alamos, NM**

ADJOURN FOR DAY

- 6:00-8:00 pm **Welcome Reception – Sponsored by Berylliant, Inc. Elegante Hotel Atrium**

Symposium at a Glance

WEDNESDAY, November 19, 2008 - All times are Mountain Standard Time

7:00-8:30 am	Registration – Lobby	Breakfast – Dining Room B & C
9:00 am-5:00 pm	Vendor Exposition Open Dining/Break Room B & C	
SESSION C Auditorium	Analytical - Sample Preparation, Sampling – Kevin Ashley, CDC/NIOSH, Presiding	
	Sponsored by ASTM International	
8:00 – 8:05 am	Introduction, Kevin Ashley	
8:05-8:25 am	A Matrix of Beryllium Sampling Applications - Gary E. Whitney, Los Alamos National Laboratory, Los Alamos, NM	
8:25 – 8:45 am	Surface Sampling for Metals - Steven D. Jahn, Savannah River Nuclear Solutions, Aiken, SC	
8:45 – 9:05 am	Beryllium Particulates and Wall Deposits – What are our options - Melecita M. Archuleta, Sandia National Laboratories, Albuquerque, NM	
9:05 – 9:25 am	On Wiping the Interior Walls of 37-mm Closed-face Cassettes: an OSHA Perspective - Warren Hendricks, OSHA Salt Lake Technical Center, Sandy, UT	
9:25 – 9:45	The Real Issue with Wall Deposits in Closed Filter Cassettes – What's the Sample? - Michael J. Brisson, Savannah River Nuclear Solutions, Aiken, SC	
9:45 – 10:00 am	BREAK – Sponsored by Brush Wellman	
10:00 – 10:20 am	Interlaboratory Evaluation of a Standardized ICP-MS Method for the Determination of Trace Be in Air Filter Samples – Kevin Ashley, CDC/NIOSH, Cincinnati, OH	

Symposium at a Glance

10:20 – 10:40 am	AIHA Accreditation and Proficiency Testing for Beryllium - Cheryl O. Morton, American Industrial Hygiene Association, Fairfax, VA
10:40 – 11:00 am	Ensuring a Robust Quality System through Accreditation - Brian D. Conner, American Association for Laboratory Accreditation (A2LA), Frederick, MD
11:00 – 11:20 am	Generating “Fit for Purpose” Data when Sampling and Testing - Albert A. Liabastre, US Army Center for Health Promotion and Preventive Medicine- South, Fort McPherson, GA
11:20 – 11:40 pm	A Brief Exposé of “Detection Limits”: Science, Politics, and Public Relations - Charles B. Davis, EnviroStat, Las Vegas, NV
11:40 – 12:00 pm	Advantages of Multivariate Spectral Deconvolution Techniques for Interference Correction in Beryllium Analysis by ICP-OES - James M. Robbins, US Department of Energy, National Energy Technology Laboratory, Albany, OR
12:00 pm -1:30 pm	Lunch – Sponsored by National Jewish Health Exhibits Staffed
SESSION D Auditorium	Research Frontiers - New Advances and Research Needs – David Weitzman, Department of Energy, Office of Worker Safety and Health Policy, Presiding Sponsored by DOE
1:30 – 1:35 pm	Introduction – David Weitzman
1:35 – 1:55 pm	The Development of an Interactive Guide to Working Safely with Beryllium and Beryllium-Containing Materials - Marc E. Kolan, Brush Wellman Inc., Cleveland, OH
1:55 – 2:15 pm	New Method for Removal of Spectral Interferences for Beryllium Assay using Inductively-Coupled Plasma Atomic Emission Spectrometry - Sherrod L. Maxwell, Savannah River Nuclear Solutions, Aiken, SC

Symposium at a Glance

2:15 – 2:35 pm	Beryllium Speciation in Physiological Conditions - T Mark McCleskey, Los Alamos National Laboratory, Los Alamos, NM
2:35 – 2:55 pm	Reference Material (SRM) 1877 Beryllium Oxide Powder: Certification of Beryllium Mass Fraction- Michael R. Winchester, National Institute of Standards and Technology, Gaithersburg, MD
2:55 – 3:15 pm	BREAK - Sponsored by High Purity Standards Last Chance to View Vendor Exhibits
3:15 – 3:35 pm	Dissolution Studies on Large BeO Ceramic Particles using Ammonium Bifluoride Aqueous Solutions – Anoop Agrawal, Berylliant, Inc., Tucson, AZ
3:35 – 3:55 pm	An Improved Beryllium Determination for Air Filters and Surface Smears Utilizing High Throughput Automated Fluorescence - Thomas J. Oatts, B&W Y-12, Y-12 National Security Complex, Oak Ridge, TN
3:55 – 4:15 pm	Extraction and Fluorescence Method for the Determination of Trace Beryllium in Soils - Kevin Ashley, CDC/NIOSH, Cincinnati, OH
4:15 – 4:35 pm	Comparison of Beryllium Determinations by High Throughput Fluorescence and ICP Emission Spectroscopy: Data from the Oak Ridge Y-12 National Security Complex - Thomas J. Oatts, B&W Y-12, Y-12 National Security Complex, Oak Ridge, TN
4:35 – 4:55 pm	Fluorescence Analysis of Beryllium in Samples Contaminated by Strongly Fluorescent Impurities - Anoop Agrawal, Berylliant Inc, Tucson, AZ
4:55 – 5:15 pm	Beryllium Research Needs - Mike McCawley, Department of Community Medicine, School of Medicine, West Virginia University, Morgantown, WV
5:15 – 5:30 pm	CLOSING REMARKS – Michael J. Brisson, Savannah River Nuclear Solutions, Aiken SC

